

INTEROFFICE MEMORANDUM

TO: Don Greenbaum
FROM: Frank Leonardi
DATE: August 20, 1985

Attached is a quick summary of the last three weeks' efforts in our "road show" to computer specialty stores.

Objectives:

- 400+ specialty store locations
- Apple and IBM dealers were targeted
- Small and medium stores throughout U.S.
- Begin University/Higher education interest
- No volume pricing discounts
- No mail order resellers
- Each dealer to service and support consumers
- (Service bench at each location)

Achievement:

- 530 locations signed up (Total)
- 22 Computerland locations
- 91 Computer depot locations
- 22 Computer factory

It appears that over 700 stores will be signed up by October 1st. The average store is currently ordering 12-15 systems per location for the first month's delivery.

Approximately 40% are signing up for the floor plan.

Attached are copies of the favorable press we are receiving.



Commodore to Introduce Its Amiga

By DAVID E. SANGER

In the first introduction of a major home computer system since I.B.M. brought out its ill-fated PCjr two years ago, Commodore International Inc. is expected to show its long-awaited Amiga machine tomorrow night, hoping the machine's dazzling color graphics and stereo sound capability will stem Commodore's multi-million-dollar losses.

For Commodore, the new Amiga marks a sharp change in strategy. It will carry a base price of about \$1,400, seven times more expensive than the Commodore 64 home computer that put the company's logotype in millions of living rooms. Company officials say it is aimed not only at home users but small businesses and students, making it a competitor of Apple Computer Inc.'s 18-month-old Macintosh.

Industry analysts agree that if the Amiga is successful, it may be at Apple's expense. The Amiga and the Macintosh are similar in capabilities; both boast unusually good graphics capabilities and are built around the same microprocessor. But unlike the Macintosh, the Amiga's graphics are in color, and retailers and consultants who have seen the results describe them as stunning. Until now, they contend, computer-generated drawings of the Amiga's quality and resolution were available only on \$10,000 engineering workstations.

"People who haven't said anything nice about a home computer in three years rave about the Amiga," said Bennett Wiseman, an analyst for Infocorp, a Cupertino, Calif., market research group. "This is the kind of computer that people really get excited about. But these days, that is no guarantee of success."

Right now, a guarantee is precisely what Commodore needs. Eighteen months ago, when Texas Instruments Inc. had already dropped out of the home computer business and Atari, Coleco Industries and Timex Group Ltd. were already in shambles, Commodore Continued sales of only six the abri Jack founder.

Under the leadership of Mr. Tramiel's successor, Marshall Smith, sales of the Commodore 64 dropped quickly and a successor machine flopped. In the quarter ended in March, Commodore lost \$20.8 million. Mr. Smith blamed most of the troubles on the "shambles" left by Mr. Tramiel, who has since purchased Atari from Warner Communications. Surrounded by a score of former Commodore executives, Mr. Tramiel has since been mired in court battles with his former company, and many in the industry question whether the new Atari will survive.

Commodore Buys Amiga

Many of those legal feuds have revolved around the Amiga Corporation, a small Silicon Valley company whose technology for an inexpensive color version of the Macintosh once looked like Atari's greatest hope. But last summer, in a surprise move, Amiga ended its relationship with Atari and was purchased by Commodore.

The Amiga machine bears little resemblance to the computer that the Amiga Corporation showed the press

in mid-1984. Sources say that the machine is built on the Motorola 68000 microprocessor, but that the color graphics are performed by a series of custom-designed support chips, leaving the central processor free to perform other work.

The basic model will come with 256,000 bytes, or characters, of internal memory, but the machine is designed to handle up to 8 million bytes in later versions. It will include a 3.5-inch disk drive, with twice the storage capacity of the one used in the Macintosh. Like the Macintosh, the Amiga will have a set of sound chips to play music, but sources say the Amiga sound system is far superior. The computer reportedly provides stereo sound if connected to external speakers.

The machine's operating system, its most basic program, will be capable of running several programs simultaneously. But the computer is not compatible with the Macintosh, which means that Commodore could face the same problems that plagued Apple: an initial lack of software for the machine that could greatly harm early sales.

About 27 software packages will be available when the machine goes on the market in September, and officials of the Microsoft Corporation, one of the largest software houses, say they are working on several

more. In time, sources say, the machine will run programs designed for the International Business Machines Personal Computer, but which will require an added circuit board.

At \$1,400, the machine could suffer another problem, analysts say. Like the PCjr, it may prove far too expensive for the home user. But Clive Smith, a top Commodore executive disagrees. "This machine is really targeted at small businesses and professionals who will want to work at home," he said. "Obviously some people will use it for entertainment and education, but that is not the main market."

Analysts are skeptical, but say Commodore should be able to sell 80,000 to 100,000 units by the end of the year. That figure depends partly on how many computer retailers agree to carry the machine. The retailers were hurt badly when the Commodore 64 was suddenly moved to mass merchandisers several years ago.

Mr. Smith said many retailers were already signed up, but he refused to name any — and sources say that the major chains, already overstocked with I.B.M. and Apple machines, have turned Commodore away.

At the least, analysts speculate, the Amiga will force Apple into price cuts. Whether it will save Commodore is less certain. "They've got to wonder," Mr. Wiseman said. "Where do they go if this doesn't work out?"

Computer+Software News

7/22/85

Live at Lincoln Center: A new Commodore, new Amiga

NEW YORK — The CPU will be called only the Amiga, model A1000. The name Commodore won't even appear in the advertising.

"We're not ashamed of it [the Commodore name]," says Frank Leonardi, vice president for sales of business systems at Commodore.

But Commodore definitely wants to make sure the industry knows it is a new Amiga, spawned by a new Commodore with a new management team and a new distribution plan that will perform live at Lincoln Center tomorrow, when the pc vendor officially announces its new high-end computer.

Given all that is new above, Commodore officials are confident they will come away being granted a new audience, and home, with computer specialty store dealers—many of whom have lingering hard feelings about an old Commodore: The Commodore that wrested away from them a hot-selling C-64 product only a few years ago and essentially relegated them to a massacre at the hands of price competing mass merchandisers.

That is history. Today, Commodore contends it's coming to market having learned not only from its own past mistakes but from Apple's.

Commodore is still betting on two-tiered distribution—through dealers and mass merchants—becoming the only pc vendor successful to do so. But this time around, it claims to be equipped with a carefully thought-out marketing strategy that distinctly separates products for two different distribution channels. Amiga is being promised exclusively to the dealer channel.

From the old Commodore, the new Commodore claims it has learned how to treat dealers—and how not to. There will be no "over-distribution" of product (a la Apple and IBM). There will be attractive margins; assistance in financing inventory; a credit card program for end-users; new service and support programs (assisted by its 16 rep firms, some of which formerly

budget for the first six months.

"We'll be the most exciting thing in the industry," promises Frank Leonardi, Commodore's vice president of sales for business systems, a former Apple executive.

In an interview with C+SN last week outlining the strategy for Amiga, Leonardi claimed Commodore had "hand-shake agreements" with dealers accounting for about 800 locations, which he expects to officially sign within three to four weeks. By October, he expects to sign about 500 locations, and by year-end the plan is for 1,200 outlets.

"Most of the stores we deal with will have five or more outlets," said Leonardi, estimating 60%-70% of dealers now committed are multiple location outlets. Only about 10% of those dealers are current or returning Commodore dealers. (But several hundred of Commodore's original 500-700 dealers from the old days are reportedly being used to provide the Amiga service network.)

First and foremost, Commodore has had to ask dealers to accept that it is a new company, acknowledges Clive Smith, vice president of planning and development and a former industry research analyst for the Yankee Group—one of the new faces making up the new Commodore.

"Getting used to who and what Commodore is doesn't happen overnight. It takes time to get used to. And a lot of hesitation will remain until the machine is a reality," Smith said.

But he maintains that the "ritual question, of 'can I deal with Commodore?'—which is in many ways a people question," will not take as much time to overcome as some might expect. And once dealers get on to the next question, which "then becomes a product question," Commodore will prove it is offering more than a me-too product.

"Better, faster, cheaper and more flexible," is how the Commodores oft describe the product. They concentrate on Amiga's speed, power, graphics and animation (capable of "camera quality photos") and a host of other features—the voice and music, text to speech capabilities and availability of cursor key and mouse commands—features that upstage Mac and have many research analysts drooling.

Amiga is aimed squarely at the markets in which Mac is the strongest or potentially strongest: the high-end home environment (where the computer is predominantly used for business at home and education) and small businesses. Beginning next year, however, ramped-up production will send new Amiga configurations into vertical markets (especially those design-oriented), the education (universities) market and then corporate America.

Unlike the old Commodore, this one is shy about promising to deliver the sky. Smith and Leonardi emphasize it will be one market at a time.

Having learned from Leonardi's alma mater's handling of Macintosh, Commodore says it is bringing Amiga to market equipped with key software and peripheral support that has hamstrung Mac in business.

Smith said 20-30 software packages will be available at shipping, including such titles as Chang Labs Rags-To-Riches, and parts of the Enable (Write, Calc and File) package from The Software Group. Also expected is support from biggies Microsoft and Ashton-Tate.

Microsoft spokesman Marty Taucher, acknowledging his company developed the Basic for Amiga, said there is "nothing else we can talk about." A West Coast researcher suggested Microsoft would provide further support and Bill Gates should show tomorrow as a speaker for the kickoff.

At Ashton-Tate, John Mereson, vice president of marketing, maintained his firm would be present only as a possible spectator.

According to a knowledgeable source, MS-DOS will be running on Amiga this week. Smith, however, declined comment on that report and on the likelihood that Amiga would have an IBM-compatible cartridge. Industry insiders claim the cartridge, priced at \$500, will be available.

Whatever is shown Tuesday, Smith and Leonardi promise a lot more software (and "available earlier for this machine than any other machine") is on the way, as well as peripheral support.

About 127 software developers, representing somewhere between 50-70 companies, attended a developers conference in California in May.

Most of the developers said they would prefer to do original titles, rather than port packages from other operating systems, according to Smith, although he maintains that with the C-language on Amiga, which ensures a wealth of titles, including Mac's, can be easily ported. Developers should be able to port Mac software within two-three months, according to Smith, who counts some 500 6800-based programs that Amiga could take advantage of.

Commodore's distribution plan includes taking advantage of existing markets in small businesses and "driving new ones," as Smith is fond of saying, particularly in vertical markets. About 50% of developers had plans for vertical market offerings, ensuring there will be vertical support within six months.

Commodore sees a strong market for the Amiga for any activity in which design is im-

portant, including CAD/CAM and engineering, but also including the medical uses in which Amiga's color and animation can be used to show physical features.

Universities will also get the Amiga, but the two Commodore executives said that all higher education business will be conducted through retailers. There will be no direct sales force calling on colleges, and when it comes time to hit corporate America, Commodore may provide assistance, but all sales will be directed to dealers, Leonardi promised—in recall of Apple shortcomings.

Besides software support, Commodore says Amiga will have plenty of peripherals available by fall.

The company will provide the driver for major printers, with seven or eight printers reportedly supporting the machine at launch, including the Diablo ink jet (which will be provided to retailers as demo samples), the Hewlett-Packard LaserJet, the Apple Laser Writer and the Okimate thermal printer, among others. Hard-disks will be available from Tecmar.

In general, Commodore is encouraging third-party peripheral developers—again something Apple failed to do with Mac.

Most assuredly it is Mac whose shelf space Commodore is after, if it has to steal a spot from someone. And clearly, Leonardi believes dealers will sacrifice a CPU. "No dealer will want to drop a product right away. They'll go 60 to 90 days. But I believe by Christmas they will drop or scale down on one line, offering one to show and one to go.

"We are going to give them a very strong dealer program with very strong margins," said Leonardi, who wouldn't give a margin figure. But one industry source placed the dealer discount at 40%.

The largest, most-committed dealer at presstime appeared to be Atlanta-based Computone's Future division, which has 20 stores in the Northeast. The chains has said it will carry Amiga, if software is available.

But according to vice president James Crimaldi, he hasn't seen the supply yet. "I've only seen demos running on the Amiga," he said, adding that he wants Amiga for the Christmas market. And although Commodore is bent on avoiding much association with the entertainment market—Crimaldi believes the machine's graphics will "revitalize the game market."

There are, indeed, dealers interested in Amiga still carrying battle scars. "I wouldn't touch Commodore with your 10-ft. pole," said one Southwestern MicroAge franchisee privately. "I wouldn't touch them if they were selling IBM PC's for \$2.94."

Others are more willing to forgive, including Joel Kornreich, president of Computer Strategies, Spring Valley, N.Y., one of a variety of former Commodore dealers suing the company for its channel switch. He'll forgive if the two sides can settle his suit.

"I really feel they are on the way to cleaning up their act," said Kornreich. "I wouldn't mind handling it [Amiga], especially with the new management."

Chuck Boyle, a partner in ComputerEase, a six-store chain in Wallingford, Conn., who planned to hit the black-tie-optional debut at Lincoln Center, leveled some complaints about lacking software margins. But despite his pessimism, Boyle, and much of the industry, is looking for something hot to stir up some end-user interest.

"Maybe we're grasping at straws, but the industry needs something new," said Boyle. ●

COVER STORY

Commodore debuts jazzy Amiga today

Retailers, software and firm's own image all are obstacles PC must conquer

By Kevin Maney
USA TODAY

Tonight, Commodore International Ltd. goes black tie to introduce its new Amiga personal computer.

Lincoln Center's Vivian Beaumont Theater is the scene of the unveiling. Pop artist Andy Warhol, singer Deborah Harry and others will help celebrate, staging the

kind of new-product splash the slumping computer industry hasn't seen for months.

It's a big step for the company known for the 3.3 million Commodore 64 home computers it has sold at K mart and Toys R Us. Indeed, it's rather like a Go Kart maker taking a sophisticated sports car to market.

Experts say the machine, to cost about \$1,400, is a technological beauty. Looking on the outside like IBM Corp.'s PCjr, Amiga's innards more resemble Apple Computer Inc.'s Macintosh. It works faster than almost any computer in its price range, and really shines in graphics and sound.

But is the market ready for the MTV of computers, a machine that can growl in stereo like an electric guitar and brilliantly animate color pictures?

"I don't think anyone doubts that it is a spectacular piece of hardware," said Douglas Cayne, analyst with The Gartner Group in Stamford, Conn. But he added the critical thought: "The question is whether that's enough anymore."

Commodore says yes and will spend \$20 million to \$25 million in six months — up to \$50 million in a year, some say — to push the Amiga down the road to success.

But several roadblocks await:

■ Commodore wants to sell Amiga through computer specialty stores such as ComputerLand and Entre Computer Centers. But those retailers are carrying fewer lines, and

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COVER STORY

Amiga's key: Software

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usually just from IBM, Apple, Compaq Computer Corp. and AT&T Corp. In fact, the top five chains, representing about 1,000 stores including ComputerLand and Entre, say they won't carry Amiga.

"We're very satisfied with IBM, AT&T and Compaq," said Mike Spinharney, vice president for marketing of Valcom Computer Centers' 175 stores. "It would be very awkward to add a fourth, not only in terms of shelf space, but in mind space of salesmen and technicians."

■ Commodore wants to sell Amiga to professionals and small-business owners, but it must overcome its image as a maker of toy computers — and one that's had financial difficulties, losing \$20.8 million in its most recent quarter.

"I think that will be a real problem for them," said Regis McKenna, who masterminded the marketing of the first personal computers. Consumers will have to believe that Commodore can support the Amiga and build it up into a system, and that the company will be around in coming years. "The future becomes very important when selling the present. That's true with all high-tech products."

■ The home market, where Commodore is known best, has been pronounced comatose this year by most industry leaders, especially for any product priced higher than \$1,000.

"It's certainly not clear there is a market there," said Esther Dyson, editor and publisher of the soon-to-appear *Computer Industry Daily* newspaper. "It looks too expensive for a home computer, and businessmen don't need jazzy graphics. I saw it myself and I loved it, but I don't think I'd pay for it."

■ Commodore may find it difficult to get software companies to write programs for Amiga, much as firms delayed writing for Macintosh. Commodore says 27 programs are now available, but programmers often wait to see if a machine is successful before plowing money into development. And that often contributes to a machine's lack of success.

But then again, the technology of Amiga might win over the software industry. Trip Hawkins, president of Electronic Arts, the software company that is developing the most programs for Amiga, likens it to a television set you can interact with: "It's a computer that has the power and capability to take you anywhere in the universe, anywhere in time, and be part of what's going on."

"The key is getting the computer infrastructure to accept the product," said marketer McKenna. If software comes flying out from the big producers — and Microsoft Corp. is working on several — it could convince some of the retail chains to take a second look.

And not all analysts think consumers

will yawn. "I don't think Commodore could wait until after the whole industry turns before introducing this product," said Eugene Glazer, technology analyst for Dean Witter Reynolds Inc. "This is a type of product that is quite different from what's out there now, so it has the potential to perhaps bring buyers back."

Commodore is not talking about how it will persuade retailers to carry Amiga or how it plans to spend Amiga's advertising dollars. Analyst Cayne said, however, that some of the prototype ads he saw took direct shots at Macintosh, comparing the machines side by side.

But the ads had better work, with competitors snapping at Commodore's heels. James Copland, vice president for marketing of archival Atari, said about Commodore's ad budget, "My hat's off to them. That's exactly what they lost last quarter. Hey, keep going. The more they spend, the less they have."

And Apple doesn't think it has to worry. Bruce Mowery, Apple's advertising and sales promotion manager, said, "Apple, above all, has been the premier consumer advertiser in personal computers. And we think it's paid off."

Amiga is getting a lot of free publicity in the computer press, and here the technology is selling itself. A gushing 13-page spread in the August *Personal Computing* magazine proclaims: "The Amiga looks like a normal computer. It's not."

And many of the stories delve into Amiga's history — a tale that uncovers the computer as not a pipe dream of Commodore the toymaker but as a creation of veteran high-tech designers who later were bought out by Commodore.

CW Communications Inc. plans to come out with a magazine, *Amiga World*. And Commodore has promised an accessory aptly named the "Trump Card": a \$500 add-on circuit card that will make the Amiga compatible with IBM computers, the business world's standard.

"It's pretty tough to bring in a new machine today — I don't care what name you have on it," said Egil Jullussen, president of Future Computing Inc., a market research firm. "But Commodore's strategy is very good."

In the end, analysts will be watching to see if the technology sells itself, with or without a sizable advertising budget.

"Its success will have less to do with the technology of the machine than with Commodore's relationship with the distribution channel," said Mike Hogan, editor of *Computer Merchandising* magazine.

But, analyst Glazer noted, "This is not a me-too product. For just another me-too product, there isn't room. But for something truly different, I think, yes, there is room."

THE REPORTER DISPATCH

GANNETT WESTCHESTER NEWSPAPERS

Gannett Westchester Newspapers/Wednesday, July 24, 1985

Amiga key to change in Commodore's image

By Peter Costa

Staff Writer

Commodore's new \$1,295 Amiga microcomputer boasts color graphics that would make even Van Gogh envious, but analysts and area computer retailers say it will succeed only if dealers agree to carry it alongside Apple and IBM products.

Mike Weigande, owner of the Programs Unlimited computer store in Scarsdale, said he thought the Amiga "sounds like it is going to be a successful machine, but I don't know when we will be able to sell it."

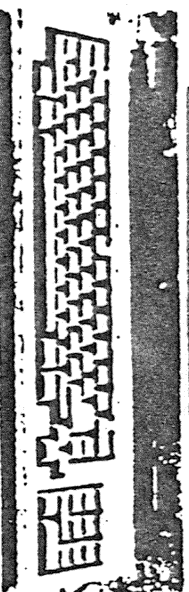
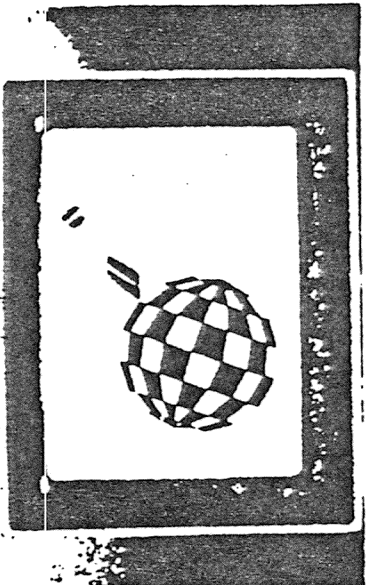
Weigande said Commodore has not yet talked to him about carrying the new machine.

Sieve Wainwright, salesman at Entree Computer

Center in White Plains, also believes the Amiga would "probably be a pretty good seller," but his store also has not been asked to serve as a retail outlet.

"It sounds like a machine for the small business user and it has a good basic price. The only problem might be the Commodore C64 home image," Wainwright said.

The Amiga, with its color graphics, speech synthesizer, animation capability and large memory, does appear targeted to small business use. Amiga could, for example, create what are called presentation graphics, color visual material that is accompanied by Amiga's text-to-speech synthesizer, allowing different



Commodore's new Amiga may grab sales from ailing Apple.

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computer generated voices to explain the graphics. The Amiga's speedy processor, and a memory relatively larger than that of other personal computers, would also facilitate extensive database management and spreadsheet analysis.

But a dealer in New City, who refused to be identified, said some potential business users — and dealers who are used to working with IBM and Apple — might question Commodore's reputation for service and sales support.

Commodore is certainly not an unknown in the computer arena. It has the largest installed user base in the world, having sold more than 3.3 million C64 home computers through outlets such as Toys R Us and other discount stores. But to get away from the toy image, Commodore plans to market the Amiga through computer specialty stores such as ComputerLand and Entre.

The Amiga, experts agree, is a technologically advanced micro-computer, based on the 32-bit Motorola 68000 processor. That is the same chip used to power Apple's Macintosh, except the Mac lacks color capabilities.

The Amiga offers a 4,096-color palette which can be manipulated by a mouse input device or cursor keys. The Amiga uses three proprietary chips designed by Commodore to provide fast color movement and animation, and analysts see the Amiga's graphics and sound capabilities as definite advantages over the Macintosh.

Joan McKay, analyst with Kidder Peabody in New York, says the Amiga is technically superior to the basic \$2,000 Mac and may swipe some sales from an already slumping Mac market.

"Certainly the Amiga is geared

to compete against Mac with its graphics capabilities, ease of use and sound capabilities. It does those things better than the Mac right now. But from the perspective of Apple, the Amiga will not be out there in large quantities in the next four to six months to really impact on Mac sales immediately," she said.

Although the Amiga offers much the same business computing power as the more costly IBM PC, the IBM PC offers much more software, two built-in disk drives or one built-in floppy disk drive and one built-in hard disk for greater storage capacity.

The basic \$1,295 Amiga, however, has many more built-in features than the Mac: it has a larger memory (256K, expandable to 8 megabytes, whereas the Macintosh offers as standard 128K of memory expandable to only 512K); a text-to-speech synthesizer plus a full orchestral instrument music synthesizer (Mac has neither); both a serial printer port and a parallel port and the ability to mix storage media — the Amiga comes with a built-in 3.5-inch floppy disk drive but will accommodate up to 3 external drives of either 3.5- or 5.25-inch format. (The basic system does not include a color monitor; color monitors cost from \$300 to \$900.)

These are the built-in options that make dealers salivate and make sales very easy, analysts said.

"We're going to have a product out there on a price and profitability basis that will be superior to the Macintosh. Because of the profitability margins that Commodore is offering dealers, I think they will find some dealers who are willing to carry it. Probably not the 1,500 Commodore claims, but perhaps 300 dealers," McKay said.

But some dealers do not think the small business user needs all the fancy graphics the Amiga provides.

"Perhaps if you are using the Amiga for CAD/CAM (computer-aided design and computer-aided manufacturing), you might use the advanced graphics, but beyond that, businessmen do not require that capability," Entre's Wainwright said.

The Amiga sells an optional add-on board that makes it IBM-compatible. With the board the Amiga will reportedly run WordStar and Lotus 1-2-3 right out of the box without modification. This capability is appealing to many dealers whose customers demand standard wordprocessing and spreadsheet capabilities with their machines and who are reluctant to try less well-known software.

Commodore reportedly will offer approximately 20 software packages for the Amiga, ranging from word processing, database managing to programming languages like Pascal, "C" and Assembly Language.

And Commodore says it has many third-party software developers who are working on programs for the Amiga in educational, engineering and business areas.

NEW YORK POST

7/24/85

Commodore takes wraps off new Amiga computer

By BRIAN CHIN & IRA MAYER
COMMODORE officially introduced its long-awaited Amiga computer to press and industry analysts last night in a splashy media event staged at Lincoln Center's Vivian Beaumont Theater.

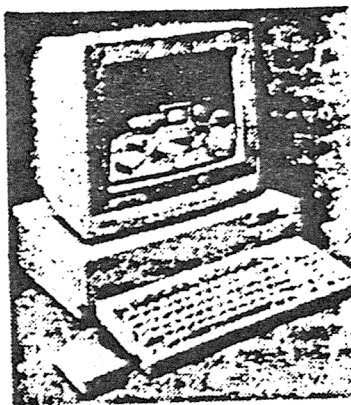
The much-anticipated machine, with high-resolution color graphics, video interface and stereo sound capability, is considered key to the company's future. Special options will make the Amiga compatible with the IBM PC.

Fifteen software packages will be available for small business, home productivity, educational and entertainment use when the computer ships in September, according to the company.

A total of over 50 Amiga software programs are under development and scheduled for release between September and January 1986, Commodore officials added.

Roughly half of these programs are to be published by Amiga itself. Hayden, Electronic Arts and Infocom are among 50 software developers independently producing or publishing software for the Amiga. Commodore executives providing an early briefing on the product rollout declined to name dealers who have agreed to handle the machine, which is aimed at the Apple Macintosh market. But the Computer Factory chain has announced it will carry the Amiga line. Other large chains, such as Computerland, do not plan to carry the system immediately.

Sales of the \$1295 machine, which includes one 3-1/2 inch floppy disk drive and a color monitor, Commodore insisted, are to be restricted to specialty stores and kept out of the mass merchant chains that sold the bulk of the



low-priced Commodore 64.

Commodore has "production capability" of over 200,000 machines for the balance of the year, according to Marshall Smith, president and chief executive.

But Smith avoided characterizing that number as a sales projection, and declined to estimate the proportion of revenues the company expects the machine to generate. Sales estimates for the Amiga by sources outside the company range from 35,000 to 100,000 before the end of 1985.

Commodore has previously stated that it will be profitable again by the last quarter of 1985, after taking likely losses in the first three quarters this year.

With the great bulk of its prior business primarily in the price-driven low-end home market, Commodore is placing high hopes on its ability to convince the "high-end home" user and small business user that the Amiga "will be the only computer you'll ever want to own," explained Smith.

To that end, Commodore is budgeting \$25 to \$50 million for an ad campaign commencing in September. Commodore will stress Amiga's speed, sound, graphics, IBM compatibility and color — the latter two features not available on the Macintosh — in its effort to lure Amiga/Mac comparison shoppers.

International launch of the



TUCSON, AZ.
STAR
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TUCSON METROPOLITAN AREA

JUL 24 1985

Commodore seeking to put \$1,295 'Amiga' in U.S. households

NEW YORK (AP) — Commodore International Ltd. yesterday introduced "Amiga," a personal computer considerably more powerful and more expensive than the \$200 machine that Commodore has sold to millions of American households.

The basic Amiga carries a suggested retail price of \$1,295, and includes a color display screen and 256,000 characters of main memory that is expandable to 512,000 characters.

It also employs a version of Motorola Inc.'s 68000 microprocessor, the same microprocessor that powers Apple Computer Inc.'s Macintosh personal computer. For that reason, Commodore boasts that Amiga has the same graphics capabilities and ease of use that reviewers of Macintosh have described as excellent. The basic Macintosh system costs about \$2,000.

In addition, Commodore said an option is available that allows the Amiga to run certain popular software designed for IBM Corp.'s Personal Computer, which analysts consider the industry standard in the microcomputer business.

That software includes Lotus Development Corp.'s 1-2-3 and Ashton-Tate's dBase III business programs.

The Amiga, which will be available in September, represents a major strategic change for Commodore, which needs a strong new product to help bolster its recent financial problems.

In Commodore's fiscal third quarter, which ended March 31, the company lost \$20.8 million on sales of \$168.3 million, compared with year-earlier profit of \$36.3 million on sales of \$326.2 million.

JUL 24 1985

Commodore Unveils Amiga Computer

By Michael Schrage
Washington Post Staff Writer

NEW YORK, July 23 — Commodore International Ltd. yesterday unveiled its Amiga computer, a machine it hopes can spark some life into the sagging home and personal computer market.

Stuffed with custom-designed chips and a powerful microprocessor, the \$1,295 Amiga is Commodore's most serious bid yet to transform itself from a high-volume manufacturer of low-end home computers to a marketer of high-quality personal computers.

"It's a home machine and also a business machine," said Commodore chief executive officer Marshall Smith. "It's got speed, color and compatibility with IBM personal computers."

The Amiga is set to go on sale in September, Smith said, and the company will try to sell upwards of 200,000 by the end of the year. Commodore will distribute the machine through computer specialty stores rather than the mass merchandisers such as Toys 'R Us that have sold the Commodore 64 and Vic 20.

Commodore's new machine is the first major new personal computer launched since IBM ceased production of its PCjr earlier this year.

Commodore is counting on it to inject some new profitability into a company whose fortunes have tumbled along with the slump in the home computer market. The manufacturer of the popular C-64 computer has seen its computer inventories skyrocket to more than \$400 million worth. The company reported nearly \$21 million in losses last quarter.

"Obviously, they can't turn an industry around by themselves," said Tim Bjarin, an industry analyst with Creative Strategies, a marketing firm. "But they have an interesting potential to capture what I call the small small business: the butcher, the baker, the candlestickmaker. That group might actually grab hold if it's marketed right. But it's a hard sell. Can a company known as a toy computer company convince people they're serious about business?"

The Amiga, with its dazzling blend of video and audio technologies, is Commodore's gamble that consumers and professionals who work at home will pay for computer technology that is far more powerful than virtually any other personal computer on the market.

Relying on a proprietary operating system similar to Apple's Macintosh, the Amiga offers stereo-sound and speech-synthesis capabilities as well as broadcast-quality

computer graphics. The machine even can be programmed easily to handle information entered from touch-tone phones.

"The Amiga is genuinely exciting," asserted Marty Alpert, president of Tecmar Inc., a computer peripherals company. "It has a chance to become a significant machine in the business environment."

But most observers assert that marketing and distribution—not technology—will be the key to the Amiga's success or failure. Citing Apple Computer Inc.'s disappointment with its innovative Macintosh computer, they are skeptical of the Amiga's chances in today's murky retail channels.

"If anybody in the field isn't aware by now that technology doesn't sell product, they're a fool," said Len Forace, president of Computers & Accessories, a Campbell, Calif., personal computer store. "They're going to have a hell of a job convincing someone to pick up the line."

Forace pointed out that the computer retailing industry is in a state of consolidation and most retailers are plagued with excess inventory, making conditions for a product launch far from ideal.

Commodore executives argue that retailers will welcome a new product as a chance to stir new interest in personal computers.

July 25, 1985

Amiga will be tops for the price

SHOULD you hold off purchasing a home computer until Commodore's fancy new Amiga hits the shelves in September? That depends on what use you have for a computer and how long you want to wait for off-the-shelf software to run it.

Based on a preliminary view of the machine — and no hands-on experience — Amiga does indeed have the most sophisticated graphics and sound capability of any computer in its \$1800 price range (not including monitor).

In fact, it may be a more sophisticated computer than home users

Your HOME COMPUTER and you

By IRA MAYER and BRIAN CHIN

want or need. Despite Commodore's claims of ease-of-use, Amiga's many bells and whistles could be intimidating.

Only 15 programs will be available for the Amiga when it makes its debut. This will be somewhat mitigated by the fact that the machine will come with a potpourri of music, animation, speech synthesis and text processing programs of its own.

In addition, 50 programs are promised by January (though such promises are the bane of the computer world.)

As happened with Apple's Macintosh, it is likely to take 18-24 months before an appreciable amount of software from outside developers is on the market. It will also take that long — as it did for the Mac — for programmers to begin to take full advantage of the system's video and sound.

The upshot is that if you are interested in electronic animation or musical composition, the Amiga provides a level of computing power that was previously limited to machines many times its price.

As a computer for home and small business use in word processing, numbers crunching and other day-to-day routines, the advantages of the Amiga are less immediately apparent. None of the major program houses have set plans for top-of-the-line word processing, spreadsheets or databases as yet.

If you can get by on elementary programs for the time being, and want to have a computer that has been designed with expandability in mind, Amiga, assuming production-line models have been properly debugged and software development proceeds apace, will be perfect.

The New York Times

TUESDAY, JULY 30, 1985

PERIPHERALS

Commodore Introduces New Amiga

By PETER H. LEWIS

COMMODORE'S new Amiga, a 16-bit computer that unveiled at Lincoln Center last week, has, in the eyes of many, the look of a 1980s classic. It is a sleek, compact machine, with a built-in monitor and keyboard, and a design that is reminiscent of the original Commodore 64. Yet even surrounded by all the other computers on display at the show, the Amiga stood out clearly as the most powerful and versatile of the lot. When it was unveiled, it was the only computer on display that was not a clone of the IBM PC or its compatibles.

Whether it will sell is another matter. In the current turbulent computer industry, even a dazzling machine like the Amiga—It has been described as a color Macintosh that works faster than an IBM PC AT—has to fight for display space in the stores and is not guaranteed success.

Two major hurdles must be cleared if the Amiga is to survive its infancy.

The first is identity. At \$1,295, plus \$200 for a color monitor, it is too expensive for the casual home user, who may not know what to do with it. Amiga's impressive horsepower. And as a new, untested machine from a company that has previously sold its products in toy stores, Amiga faces a tough challenge in cracking the con-

sumer market. The second is software and peripherals. About 15 programs will be available at Amiga's debut, but only three are considered to be useful business tools.

It took more than a year for software developers to catch up with the Apple Macintosh and there is no reason to believe Amiga will reach its software potential any sooner.

The hardware horizon looks brighter. Commodore, avoiding the close-knit philosophy that retarded the Mac's development, opened its market to third-party peripheral makers and has several add-on products already in the pipeline.

The most interesting is an optional 1.1-M. emulator that will allow the Amiga to run most off-the-shelf 1.1-M. software, including Lotus 1-2-3, dBase III and Wordstar.

Those are the formidable hurdles. Amiga, though, is a formidable machine. Following is a rundown of some of its major features.

Power, Speed and Flash

The basic Amiga comes with 256K (256,000 bytes or "words") of random access memory, expandable internally to 512K and externally to 8 million bytes.

The brains are a Motorola 68000 microprocessor (the same one used in the Macintosh) and a unique set of three co-processor chips, one each for color graphics, sound and animation.

These three chips are designed to relieve the 68000 chip of such specialized duties. And as a result Amiga simply blazes away all competition in its price range for speed (7.16 meg-

ahertz, as against the PC AT's 9.33 megahertz), graphics (4,096 possible colors and five-layer animation, rivaling dedicated design computers costing 15 times more) and sound (16-bit digital stereo). For music and video applications the Amiga is unsurpassed. Walt Disney would have loved it.

It is operating system (Amiga-DOS) is incompatible with other computers, which means that it will not run software written for other machines without optional hardware and software modifications. This heaps more confusion on the already fractionated marketplace. Like the Mac, however, Amiga's system was designed to be easy to learn and use, with icon symbols, drop-down menus and full support for a mouse input device, which is included. It offers true multitasking, meaning that many separate tasks can be worked on at the same time.

Starbird is one built-in double-sided 3½-inch disk drive, yielding 800K of formatted storage (twice that of the Mac). External 3½-inch and 5¼-inch disk drives are optional.

The keyboard has 10 function keys (Mac has none) and separate cursor controls and numeric keypad (Commodore's own, or the IBM PC).

It all adds up to the most interesting new product in the microcomputer field since the Mac.

Junior on Sale

The Amiga is the first major entrant into the treacherous up-end home market since the 1.1-M. PCjr. 1.1-M. recently cut the price of the junior in an effort to cull what is rumored to be a formidable inventory.

One of the criticisms leveled against Junior was its stiff pricing, originally more than \$1,500 for what was essentially a lightweight comput-

er. Now the price has been cut sharply. The Excel Computer Centers of Stamford (203-348-5884) and Greenwich (203-637-1800) sell the 1.25K PCjr with one disk drive, a color monitor and a real keyboard for \$999. At that price, Junior is worth considering.

Recently a version of Lotus 1-2-3, a high-powered software package that combines several functions, was marketed for the PCjr, making it better suited for business uses than any other computer in its price range but still feeble in contrast to the big boys.

And several new hardware products that boost the Junior's power have been introduced lately.

In light of the falling cost of the 1.1-M. PC, which is nearing \$1,200 in some stores, the introduction of Commodore's Amiga at \$1,295, and the certain pressure Amiga will put on Apple to lower the Macintosh's price, it seems to make more sense to buy a bigger machine and grow into it than to buy the smaller PCjr and remodel it to meet expanding needs.

On the other hand, the Excel price makes the Junior extremely attractive for buyers who look at it as primarily a game and educational computer that can handle modest business chores as well. In a couple of years the support for Junior may dwindle, but in the meantime its value is eroding.



PHILADELPHIA DAILY NEWS

The People Paper

THURSDAY, AUGUST 1, 1985

'AMIGA' IS PRETTY AS A PICTURE

By JONATHAN TAXIFF
Daily News Staff Writer

For the first time in many moons, there's genuine excitement brewing in the personal computer field. Commodore's much anticipated Amiga computer has finally been unveiled to the press and yes, it really is a beauty.

Reasonably priced (at \$1,295), user friendly, and super powered, Amiga is designed to go where no personal computers have ventured before, and is theoretically limited only by the imagination of its programmers and users.

Consider just some of the nifty things this machine will be able to do in home, education and business applications, when it hits the dealers shelves in September:

- The Amiga literally talks your language. Type in text and the machine reads it out loud in either a male or female voice, with reasonable clarity and emotional inflection. Or, if you prefer, the Amiga can be switched to talk in a monotone style, just like a "real" computer.

- The Amiga also can sample and reproduce the sound of your own voice (with answering machine applications) — but that trick takes up an enormous amount of memory.

- In the future, a voice soundtrack will be installed on many Amiga computer programs, making the software extra-entertaining and a snap for anyone to operate: "To continue, tap the execute button, dearie."

- The Amiga contains a four-voice polyphonic music synthesizer, offering fine facsimiles of instrument sounds ranging from a banjo to a piano to a thunderous kettle drum.

- With special "MIDI" format software called Pitchwriter (from Cherrylane Technologies), you can use the Amiga to store full orchestral arrangements, in low-noise digital stereo sound. And grab this: Accord-

- ing to Cherrylane's Roger Powell, when you replay the stored music — and simultaneously perform live on another instrument — the computer "orchestra" will follow your lead precisely, slowing down or speeding up its program according to your aesthetic whim of the moment.

- Amiga offers the highest resolution graphics ever offered in a personal computer, with a color palette of more than 4,000 tones and with superb image manipulating facilities. Using special software (from Island Graphics and Electronic Arts), the Amiga lets you create a sophisticated animated cartoon or the spiffy sort of turning-inside-out/upside-down, three-dimensional logos that the TV networks are always showing off. Up until now, it took a minimum of \$10,000 in computer-aided-design hardware and software to pull off such stunts.

- The Amiga will tie in very neatly with video cameras, video tape recorders and videodisc players, utilizing an optional piece of Commodore hardware called a Genlock Interface. To give your home videos a real Hollywood production look, run a video tape signal through the computer, superimpose titles (in an unlimited number of type faces) on top of the video image, and then feed the composite finished results to a recording VCR.

- The same equipment also will let you mix animated cartoons (generated by the Amiga) with video footage. To have, say, a "Crazy Cat" kinda character frolic in the wading pool with your youngster.

- Wired to a video disc player, the Amiga can function as a disc controller, to quickly pull out information from interactive discs such as Grolier Electronic Publishing's forthcoming KnowledgeDisc video encyclopedia.

- With another device — a "frame grabber" peripheral — you'll be able to lock a single video image into the Amiga's memory, to do all sorts of color and design enhancements on the image. Then store the finished results on floppy disc or video tape, or hard copy the image with a dot matrix or laser printer. At Amiga's introduction in New York last week, Andy Warhol used the computer to churn out a zingy instant artwork of Deborah Harry that looked a whole lot like Warhol's famous Marilyn Monroe lithographs of the 1960s.

- Just point and push a button and the Amiga responds. As on the Apple Macintosh (the most sophisticated

personal computer up to now), the Amiga lets you control the computer's operations by dragging a friendly little mouse device across a desk top — affecting the movement of a flashing pointer (cursor) on the monitor screen. When the pointer lands on the appropriate graphic symbol (say a file cabinet or trash can), you just push a button on the mouse and the command represented by the graphic (such as opening, or "trashing," a computer file) is executed.

Amiga has actually got a better mousetrap — with two buttons versus Mac's one. And unlike the Mac, Amiga also features a set of four cursor keys to control the pointer's screen movement the "old fashioned" way.

Plus, there's a line command system here for people who prefer to communicate with computers in (letter and number) codes rather than with pictures.

- The Amiga does "windows," lots of 'em, and simultaneously, too. Like the Mac, the Amiga lets you lay out different work projects ("windows") on one display screen — rather like having several files spread across your desk. But while it's ordinarily impossible to work on more than one project at a time — in life or on the Mac — the Amiga's unique multi-tasking capability makes it possible for this computer to open up several windows — and thus carry out disparate operations — simultaneously. For example, it's possible to print out a letter while you're simultaneously number crunching on a spread sheet and dialing up another computer with the telecommunications program, and all at a blinding speed.

- The Amiga's multi-color graphics also make it much easier to distinguish between different windows here, than is possible on the monochrome Macintosh screen.

- This computer also is multi-tasking in another way. Two Amiga computers can manipulate the same piece of software simultaneously. For example, it's now easy to imagine two lawyers, working in offices across town from each other, using their Amigas to hammer out a brief together. Long distance, interactive video game playing also is possible now for the very first time. Whew!

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THE NEWSWEEKLY FOR THE MICROCOMPUTING COMMUNITY

WILL THE AMIGA CHALLENGE APPLE?

JAY MINER
COMMODORE/AMIGA



DESKTOP COMPUTERS

Amiga Shown With PC Option

COMMODORE'S 68000-BASED MACHINE FACING A DEBACLE OVER DISTRIBUTION; MAJOR CHAINS REFUSE TO STOCK IT

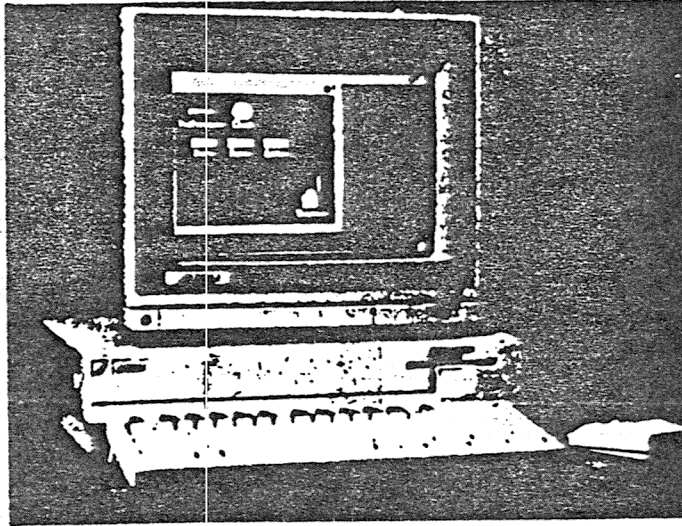
The Amiga PC, which was the object of a struggle between Atari and eventual winner Commodore over which company would make it, faces yet another problem as it is thrown into the distribution channel: Where will customers be able to buy the machine?

Commodore's newborn Amiga computer, which uses the same Motorola 68000-based processor as Apple's Macintosh but with more power and the addition of color, was plagued by a lack of dealers at its late July debut.

Reports that some national computer chains were refusing to carry the Amiga were confirmed by at least one large chain, Computerland. Spokesperson Dianne Douglas says that through a corporationwide agreement the chain has no plans to carry the Amiga. The agreement, however, would not prevent individual stores from carrying it, according to Douglas.

At the time of the computer's introduction, July 23, the only retailer to announce that it would carry the computer was the Computer Factory, a 20-store chain with outlets in Pennsylvania, New Jersey, Connecticut, and New York.

To spur interest among smaller chains,



The \$1,295 Commodore Amiga, with 256K of random-access memory and a single 3½-inch drive, is shown with an optional \$495 monitor.

Commodore executives will embark on a 37-city, nationwide tour of dealers, according to Clive Smith, vice president of planning and development at Commodore International. Commodore executives who will participate in the tour include Marshall Smith, president of Commodore International, and Thomas Rattigan, president and CEO of Commodore North America.

Clive Smith says the tour made more sense than asking dealers to come to one central location. "We are targeting 400 to 500 dealers for launch and plan to have 1,000 to 1,200 by year's end," he says.

A source close to Commodore says the company is not placing major emphasis on signing chainwide deals with the big three computer retailers — Computerland, Entre, and Businessland — because those 900 stores sell mainly

to corporate users. Commodore's deal-

er candidates sell primarily at the retail level and, hence, are smaller chains, the source says.

The biggest surprise at the Amiga's unveiling was a demonstration of the machine's emulating an IBM PC. Commodore showed the PC-DOS-based 1-2-3

spreadsheet from Lotus running on an Amiga with an optional 5¼-inch disk drive. The emulation program will be available for less than \$200 in September, says Clive Smith, and the 5¼-inch drive will cost \$395. Commodore says that with that option, the Amiga will also run Dbase III, Wordstar, and other IBM PC-compatible programs.

At \$1,295 for the basic model with one 3½-inch, 880K drive, 256K of random-access memory, and no monitor, the Amiga is competitive with Apple's Macintosh. Commodore plans to sell a color monitor for \$495 and says the memory is expandable in stages: first to 512K by adding a \$200 upgrade that the owner can install, then to 8½ megabytes

through an optional external memory unit. In addition, the Amiga has plugs for three optional disk drives.

Initially, software availability will be a problem for Commodore: Most of the programs announced for the Amiga are games, programming languages, and programming tools, not applications.

A modest selection of software will be sold under the Amiga label when the computer becomes available. For word processing, Amiga will offer Textcraft, developed by Arktronics Corp. of Ann Arbor, Michigan. Island Graphics Corp. of Sausalito, California, produced three programs: Graphicraft, a painting program; Moviecraft, which produces animation effects; and Presentationcraft, for creating presentation graphics. Microsoft will contribute ABasic, a version of its Basic language for the Amiga, with graphic statements compatible with IBM's Basic and Microsoft Mac Basic 2.0.

The Amiga's native operating system, Amiga DOS, is incompatible with software from other computers, although software developers already have various tools for moving to the Amiga programs written in C for the IBM PC or the Macintosh.

Although the Amiga contains none of the traditional add-on card slots found in the Apple II and IBM PC, it has an expansion



The Commodore Amiga and a program from Imageset of Sunnyvale, California, can be used to digitally process color art.

port allowing full access to the processor bus, on which all the Amiga chips reside. Thus, the Amiga is an open system, as opposed to the Mac's closed architecture.

Included with the Amiga operating system is Intuition, a window and screen manager that can be used to govern user interaction with the machine. Intuition contains the icons, pull-down menus, and windows familiar to Macintosh users. But users can also use standard, line-oriented Amiga DOS commands similar to MS-DOS operation.

The Amiga's mastermind, Jay Miner, previously designed the chip set of the Atari 400 and 800 computers. "A lot of the things

the Amiga does with hardware have been done before in software," he says.

Miner headed a team of designers that for the past three years slowly brought the Amiga to life. At first, the cash-poor company struggled to produce a home computer. When Commodore acquired Amiga in September 1984 for an estimated \$30 million, the emphasis changed to business applications of the computer. At the unveiling, "the emphasis was on the business market," says Andy Bose, director of microcomputer market analysis at New York research firm Link Resources.

Bose estimates that Commodore will sell a modest 40,000 to 50,000 Amigas by

year's end. "I find it difficult to go beyond that," he says. "It's going to take time for its \$20 million advertising campaign to create an impression on users."

The Amiga includes a numeric keypad and cursor keys in a diamond pattern, offering a choice besides the standard, two-button mechanical mouse for cursor movement. On the back are three connectors for composite video, a red-green-blue monitor, or an RF modulator for connecting the computer to a television. Also included is an RS-232 serial connector, parallel connector, and two mouse ports that can accept devices such as joysticks or light pens.

— Scott Mace

COMMODORE'S AMIGA FACES A REAL HORSE RACE

No one doubts that the Amiga — with its 68000 processor, color capability, icon-oriented operating system, and Commodore's marketing clout — will affect many facets of the personal computer market. But it may have arrived too late to be a major factor in some of them.

The home computer market effectively disappeared after Christmas 1984. Only a universal round of price cutting can revive that market, and with higher priced systems poised to dominate the Christmas selling season this year, that seems unlikely.

Professional graphic artists, who might find some attraction in the Amiga's color and graphics capabilities, may latch onto personal computers this year — but they may be IBM PCs, not Amigas. At the recent Siggraph computer graphics show in San Francisco, numerous packages premiered on the IBM PC AT. With special hardware add-ons, these packages can rival the Amiga in both number of colors and resolution. The Amiga is a much cheaper system, but it lacks the number of packages in the PC line.

Although the machine can move images around the screen quickly, its maximum resolution — 640 by 400 pixels — limits its use in professional graphics studios. With 1,024-pixel-by-1,024-pixel graphics boards now available for the IBM PC, the Amiga will require such add-ons to become a viable alternative.

Still, some developers are proceeding with plans to provide an interface to Amigas with video photographic devices such as the Polaroid Palette slide maker, and even typographic equipment. Imageset Corp. of Sunnyvale, California, is already offering a way to make color separations from Amiga artwork, at prices equivalent to traditional color

separation and with higher quality.

The Amiga's real impact will most likely be its effect on two similar 68000-based systems: Apple's Macintosh and Atari's ST. Although a market exists for some computer in that end of the personal computing pantheon, it's clearly too small a segment to support all three machines.

In effect, it's still a horse race. Atari, priding itself on "power without the price," is now garnering its first positive

NEWS ANALYSIS

reviews from software developers and industry observers. But they wonder with one voice whether Atari can stay the course and launch the ST in a big enough way to survive. So far, the trickle of STs, combined with low-key advertising, hasn't set buyers on their collective ear.

Apple faces the challenge of adding color to the Macintosh and repricing older hardware. Apple's safest niche is probably in the electronic publishing market, where its Laserprinter and page composition applications are months ahead of anything Amiga or Atari is doing.

All three computer manufacturers will be stressing the practical business applications of their systems to avoid the "fun and games" image that taints 8-bit computer hardware. But it's difficult to convey business application appropriateness without readily available IBM PC compatibility. "There's a lot of work going on at the ad agencies to convey the right message this fall," says one software developer.

But capturing computer screen images is only one aspect of the Amiga's power.

"It's the first machine that was designed to handle media — video media and sound media," says Timothy Mott, vice president of product development for Electronic Arts of San Mateo, California.

The Amiga's capability to capture and transmit a clean, television-compatible video signal is a first in personal computing. So is its advanced music and speech capability, which will be enhanced by a low-cost musical instrument digital interface and digital-to-analog conversion board. Software, such as the Video Construction Set from Electronic Arts, is already in development to allow mixing of graphics and sound in every kind of animation and business presentation graphics. But it's not clear how big that market is.

But flashy graphics, sound, and peripherals could be less important than one other aspect of the Amiga: its capability to accept nearly 10 million bytes of random-access memory (RAM) easily. Such capacity will feed the continuing hunger for memory by sophisticated users of personal computers. Falling prices of 256K RAM chips make the feature even more crucial. Did Amiga designers anticipate the cheap RAM chip? "I did," says Jay Miner, vice president of product development at Commodore/Amiga, "three years ago."

One thing the computer industry agrees on: The Amiga was designed properly. It probably marks the end to the industry's flirtation with closed systems; personal computer users want access to their hardware so that they can tailor it with add-ons. The Apple II and the IBM PC were the milestone computers in that department. Maybe the Amiga, and not the Mac, is the third milestone.

— Scott Mace

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